

SET 1147 FOLDER 6

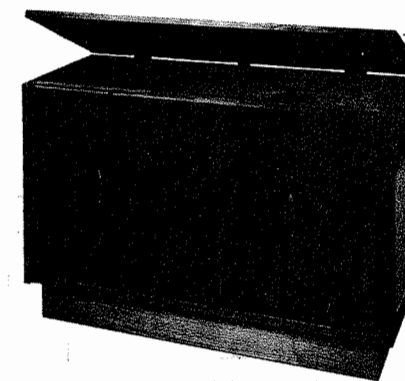
SYMPHONIC CHASSIS R-821

PHOTOFACT® Folder

with CIRCUITRACE™

For Supplier Address See PHOTOFACT Index

SYMPHONIC CHASSIS R-821



MODEL 6201WA

MODEL	CHASSIS	CHANGER	SYMPHONIC PART NO.	MODEL	CHASSIS	CHANGER	SYMPHONIC PART NO.
4301TK	R-821	GARRARD #1025	AC-543	6202MA	R-821	MAESTRO*	AC-718
5201WA	R-821	GARRARD #2025	AC-556	6203PC	R-821	MAESTRO*	AC-718
5201AWA	R-821	GARRARD #2025	AC-556	6204WA	R-821	MAESTRO*	AC-718
6201WA	R-821	MAESTRO*	AC-718	6300WA	R-821	MAESTRO	AC-719
				7200WA	R-821	MAESTRO	AC-720
				7202PC	R-821	MAESTRO	AC-720

* SEE "SERVICING" BELOW

RECORD CHANGER SERVICING ADJUSTMENTS

NEEDLE PRESSURE

Adjust screw B1 so the needle sets down in the center of the lead-in groove on a 12-inch record. Turning the screw clockwise moves the set-down point outward.

TONE ARM SETDOWN

NEEDLE PRESSURE

Adjust B2 so the top of the tone arm clears a 12-inch record on the center spindle shelf during the change cycle. Turning B2 clockwise decreases the lift-up height.

Nominal pressure grams. Move the tone-arm tension spring from hole to hole in Plate B3 to obtain correct needle pressure.

CLEANING

Use a cloth dampened with isopropyl alcohol to clean the driving surfaces of the idler wheel, motor shaft and inside rim of the turntable.

LUBRICATION

Apply light nonhardening grease to sliding cam surfaces and pivot points, light machine oil on the tone arm lift rod, idler wheel bearings, and motor bearings.

DO NOT lubricate turntable driving surface, the teeth on cycling gear or turntable hub.

REMEMBER TO ASK— "What else needs fixing?"

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. UN739

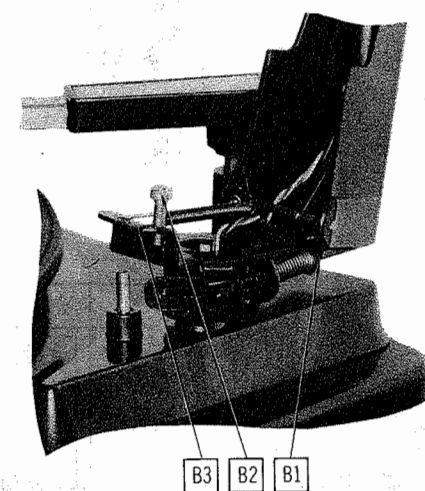
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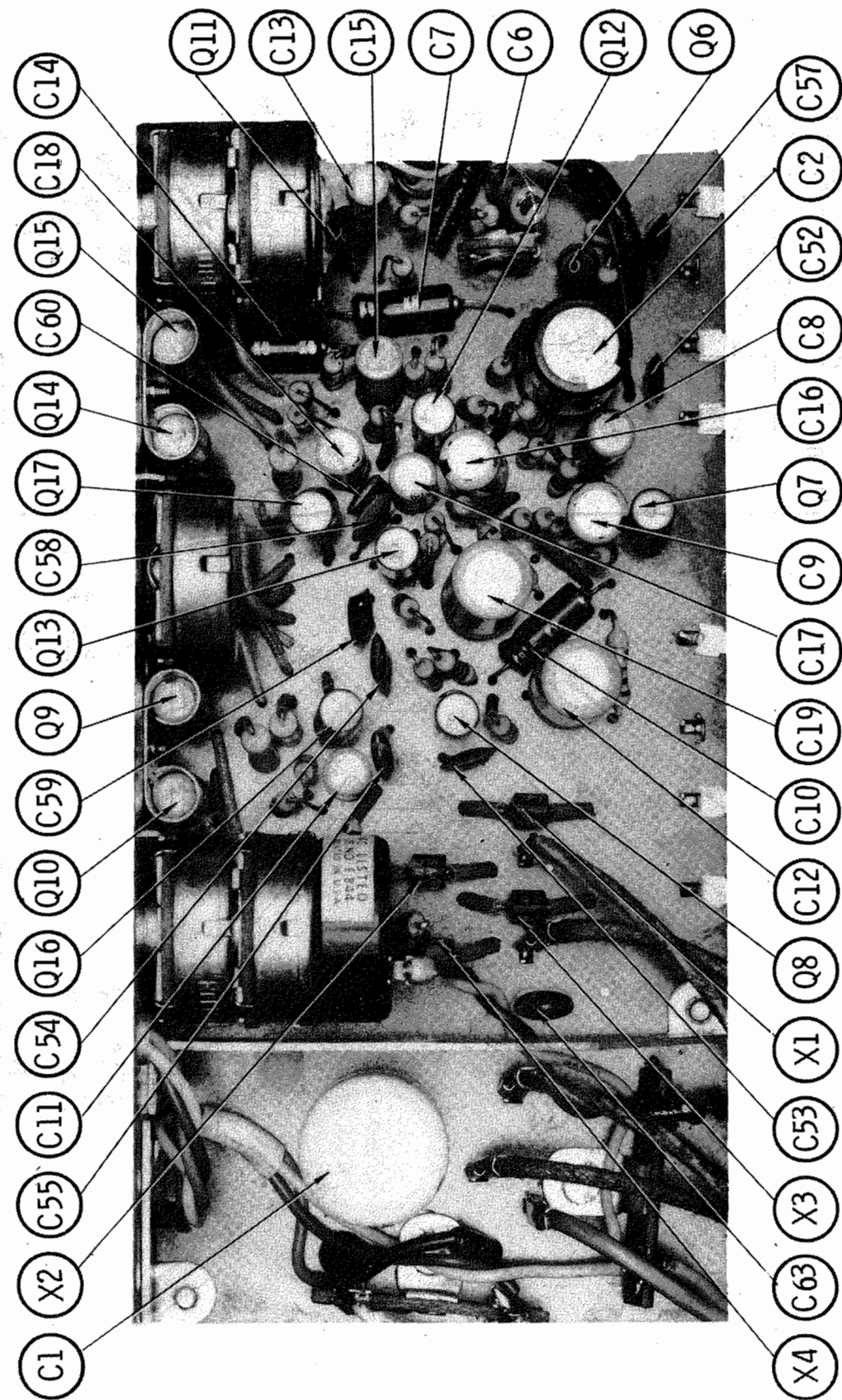
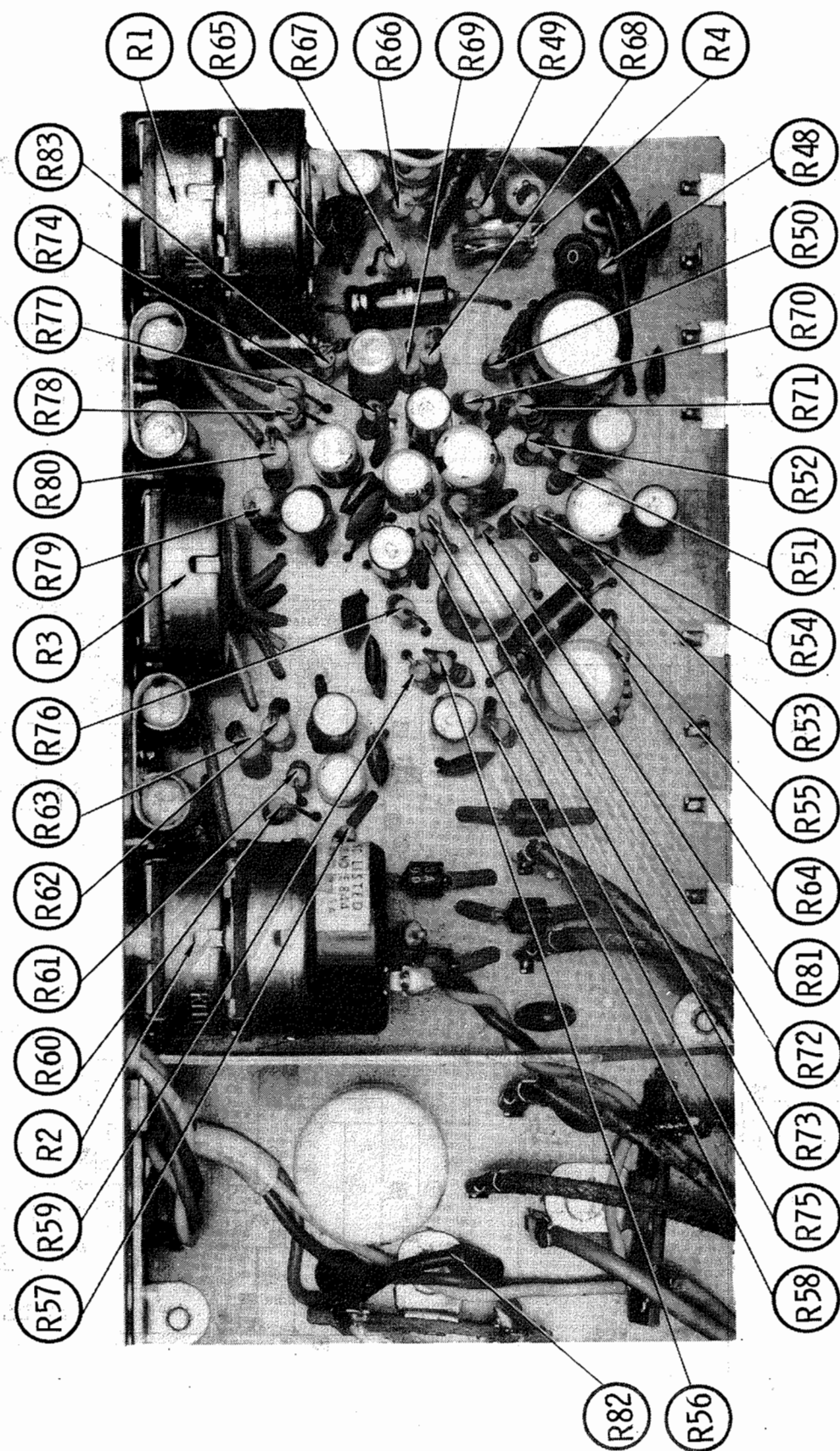
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SET 1147 FOLDER 6

SYMPHONIC
CHASSIS R-821

SET 1147 FOLDER 6





SYMPHONIC CHASSIS R-821

MODEL	CHASSIS	CHANGER	SYMPHONIC PART NO.
4301TK	R-821	GARRARD #1025	AC-543
5201WA	R-821	GARRARD #2025	AC-556
5201AWA	R-821	GARRARD #2025	AC-556
6201WA	R-821	MAESTRO*	AC-718

RECORD CHANGING ADJUSTMENTS

TONE ARM SETDOWN

Adjust screw B1 so the needle sets down in the center of the lead-in groove on a 12-inch record. Turning the screw clockwise moves the set-down point outward.

TONE ARM HEIGHT

Adjust B2 so the top of the tone arm clears a 12-inch record on the center spindle shelf during the change cycle. Turning B2 clockwise decreases the lift-up height.

CLEANING

Use a cloth dampened with isopropyl alcohol to clean the driving surfaces of the idler wheel, motor shaft and inside rim of the turntable.

LUBRICATION

Apply light nonhardening grease to sliding cam surfaces and pivot points, light machine oil on the tone arm lift rod, idler wheel bearings, and motor bearings.

DO NOT lubricate turntable driving surface, the teeth on cycling gear or turntable hub.

REMEMBER TO ASSEMBLE

HOWARD W. SAMS & CO.

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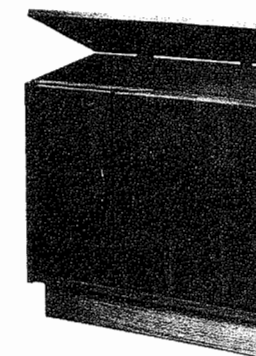


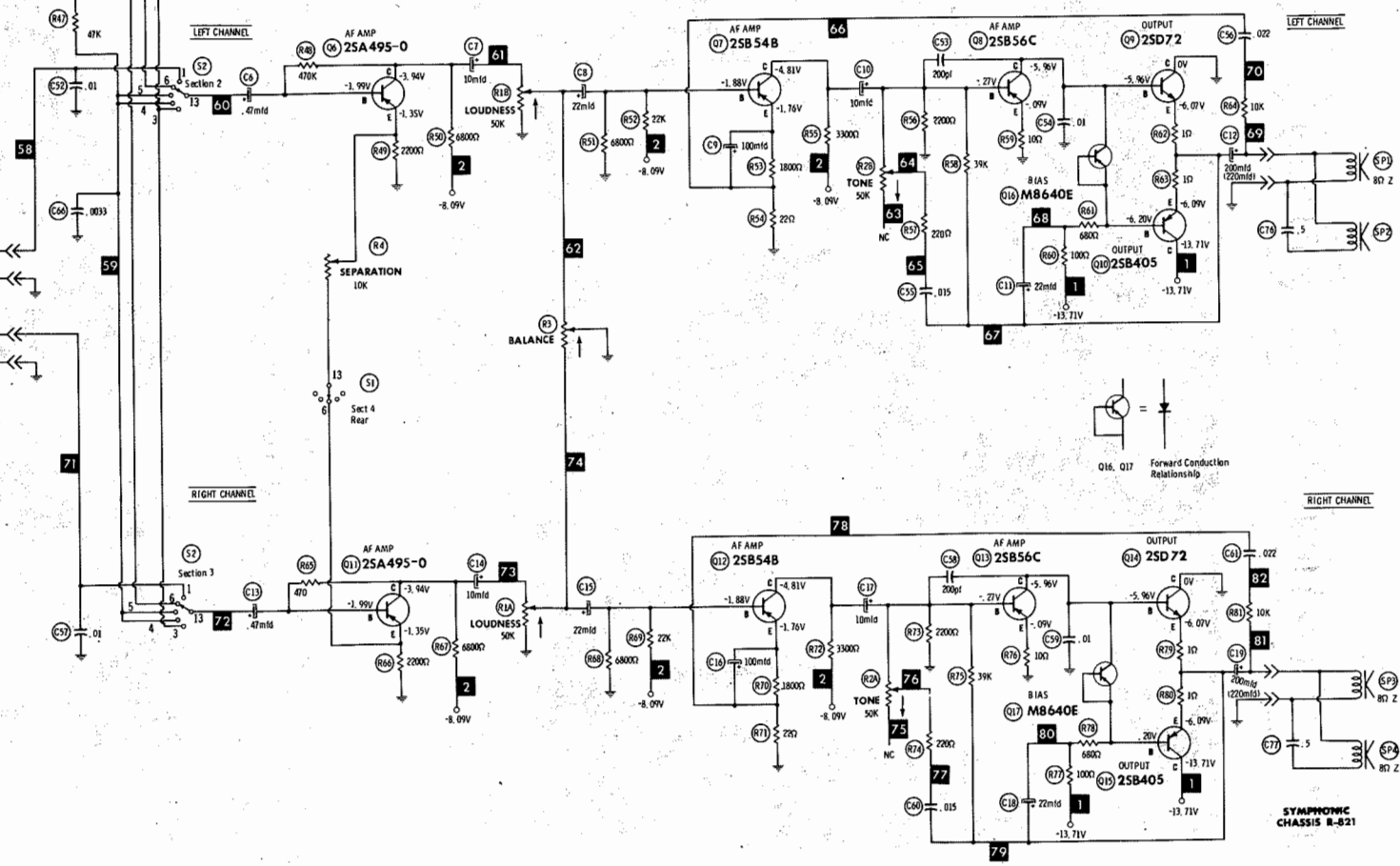
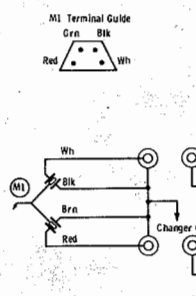
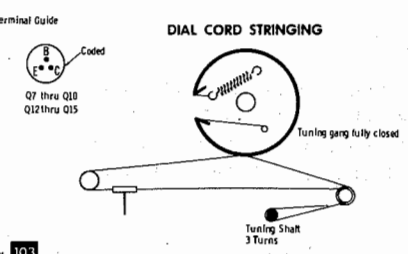
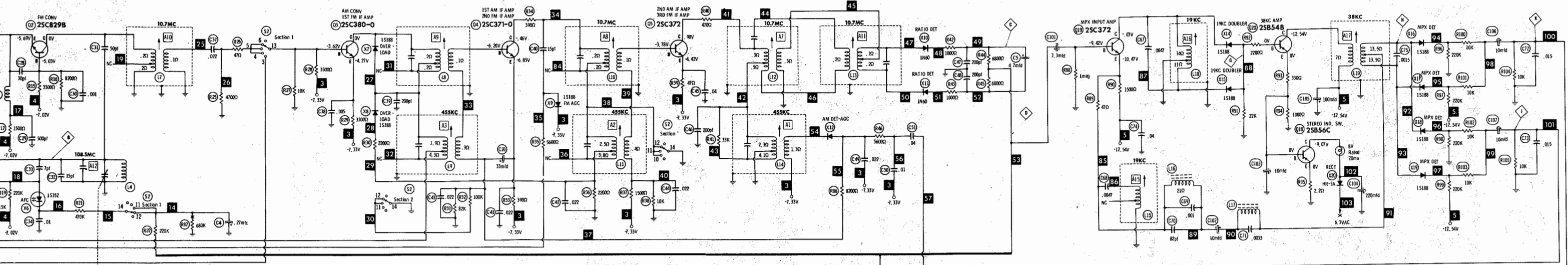
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PHOTOFACT® Folder

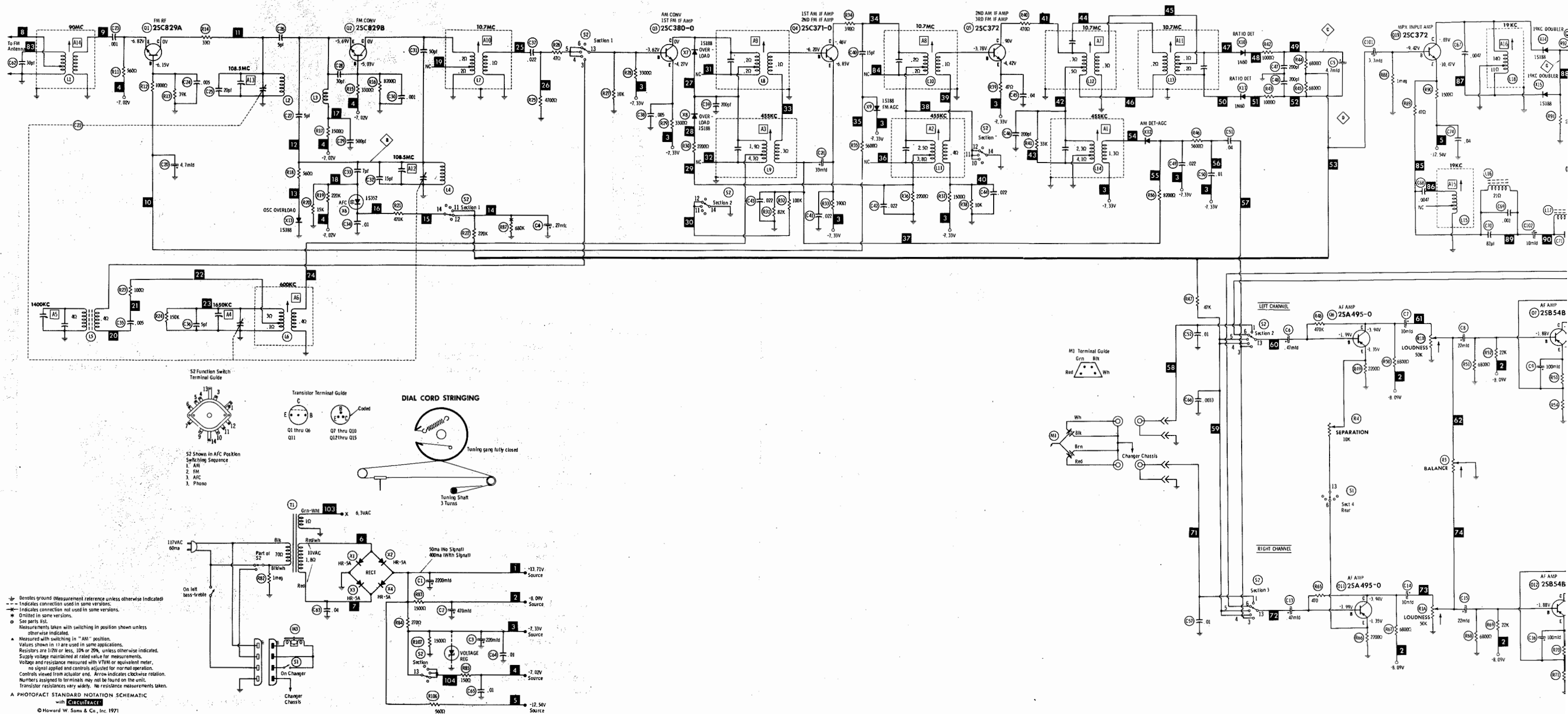
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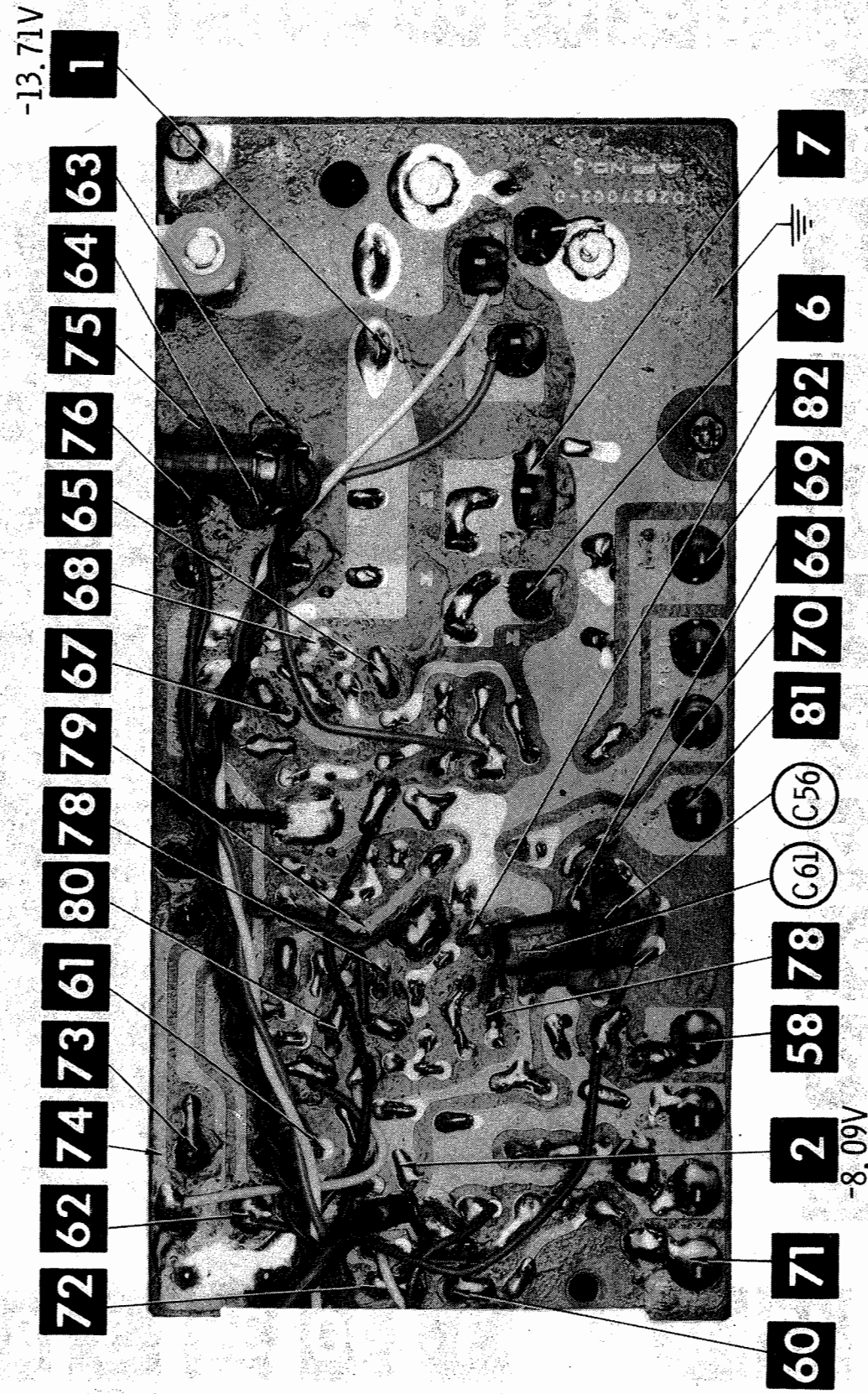
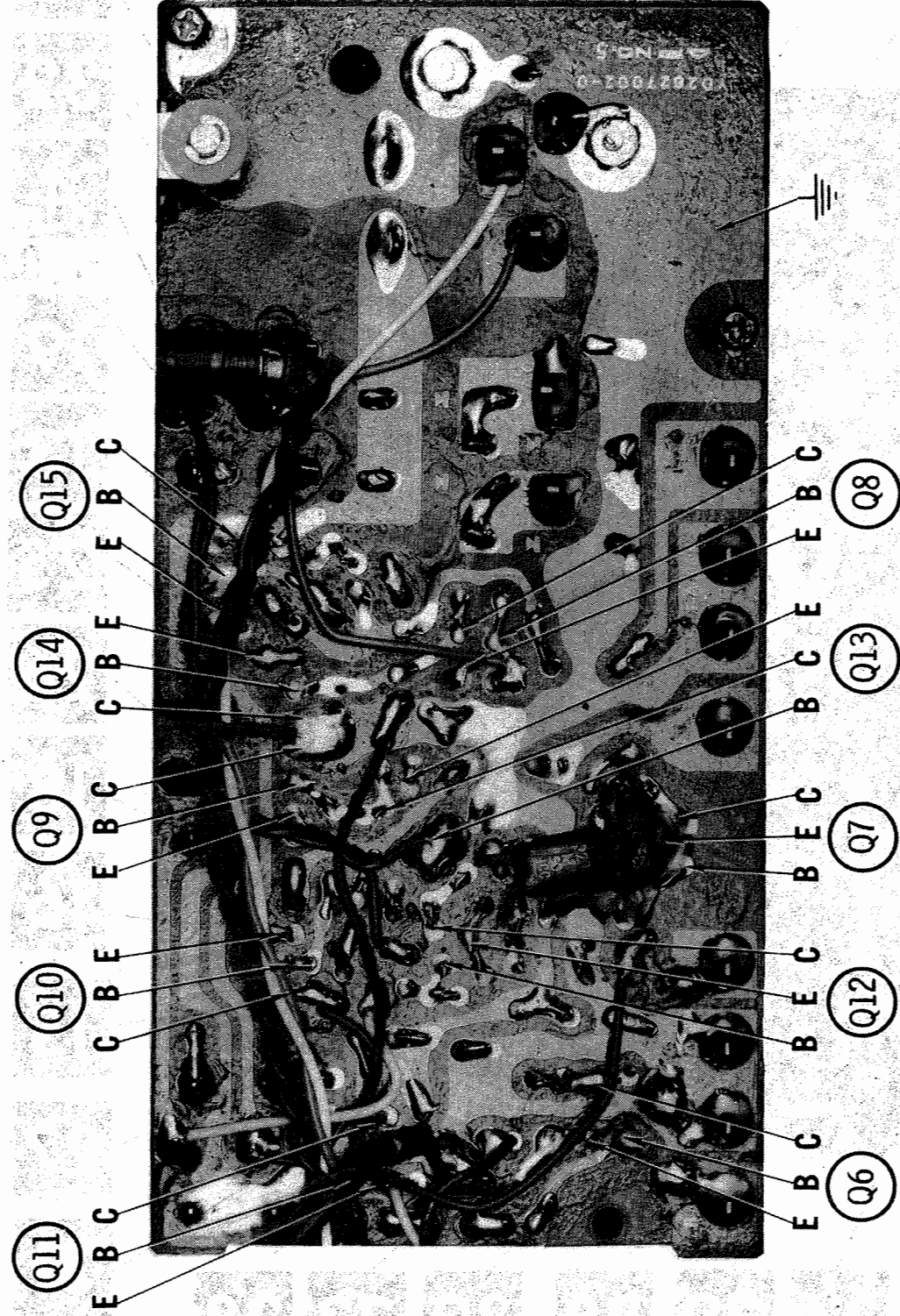
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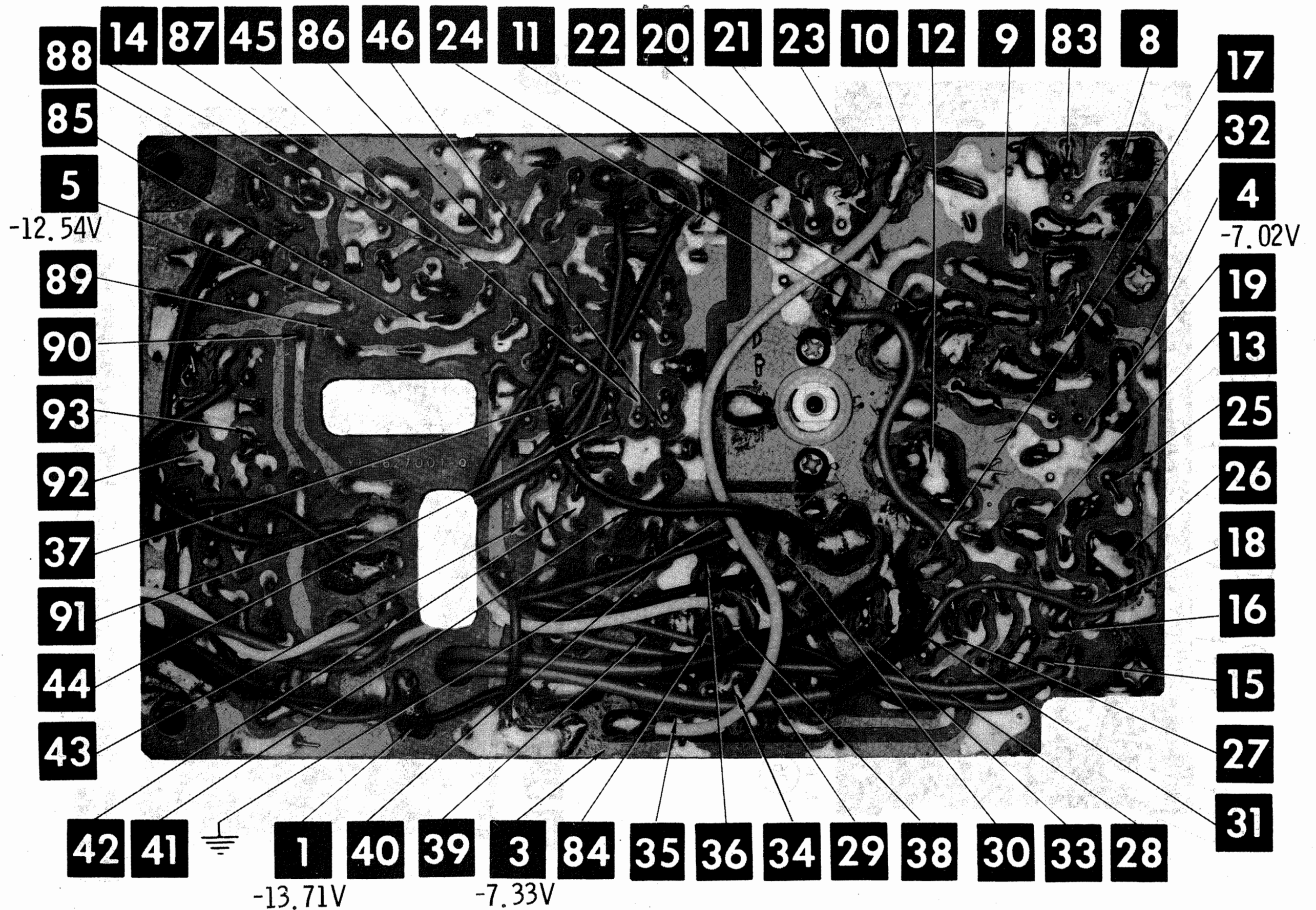


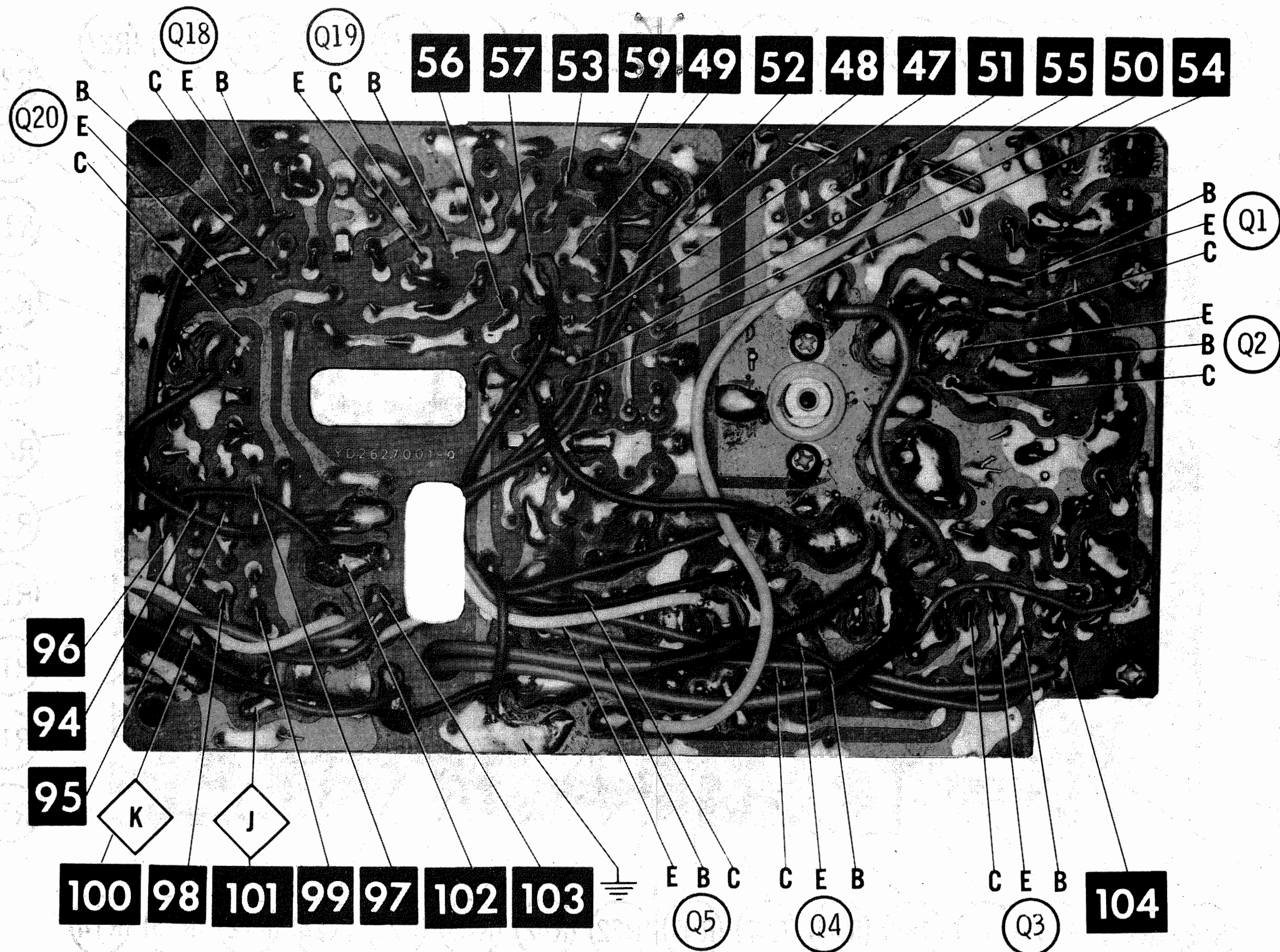


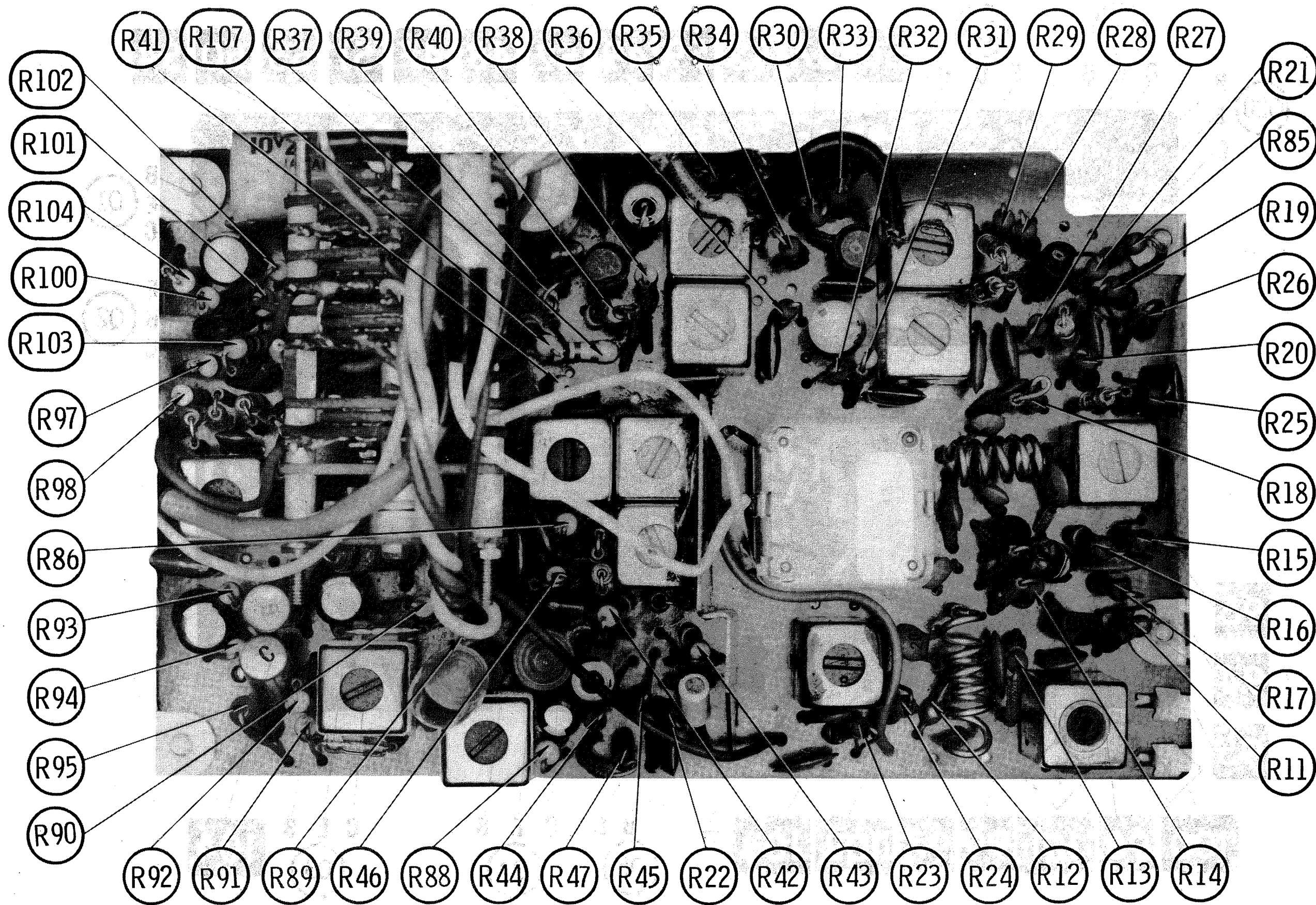
SYNCHRONIC CHASSIS 8-821

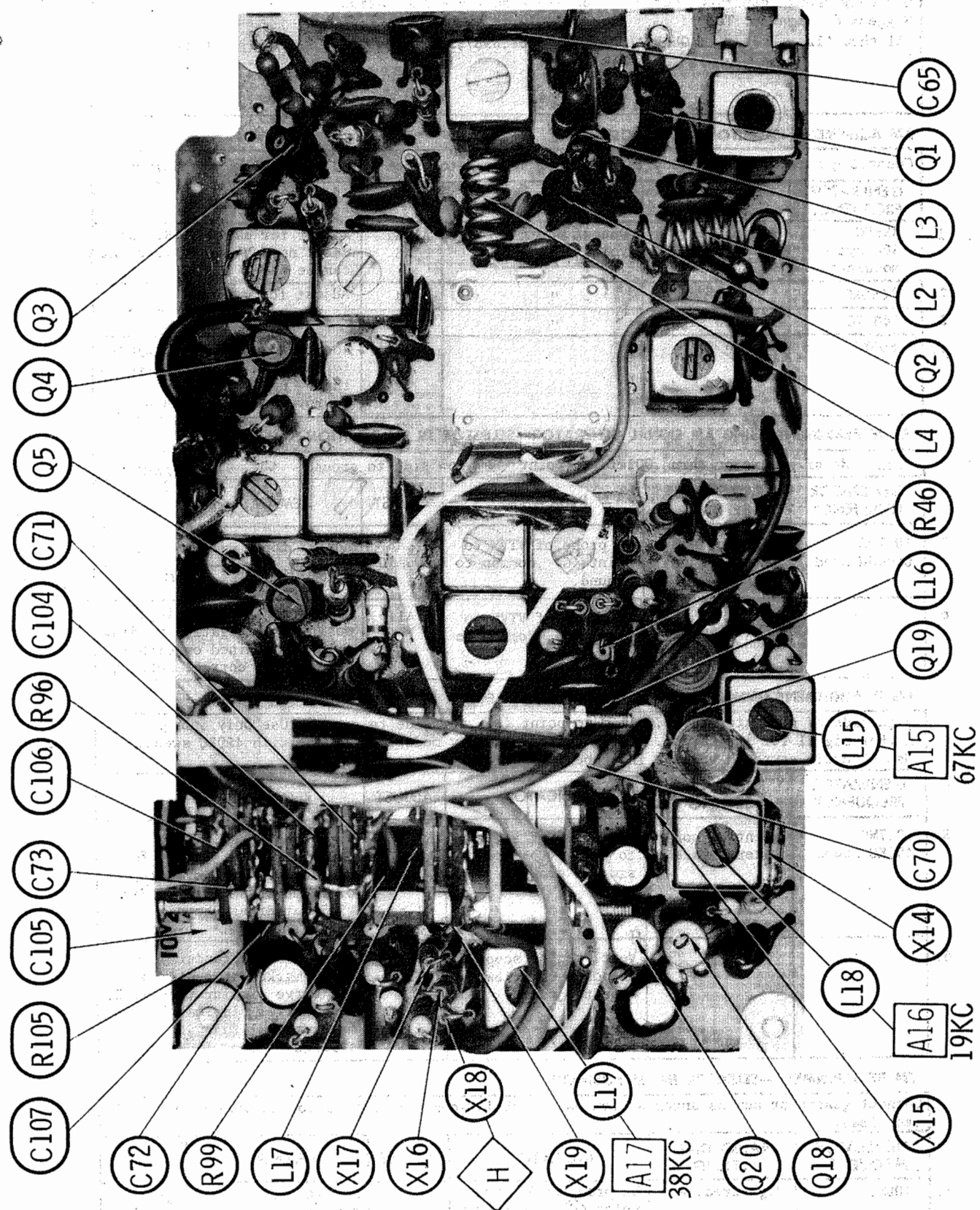
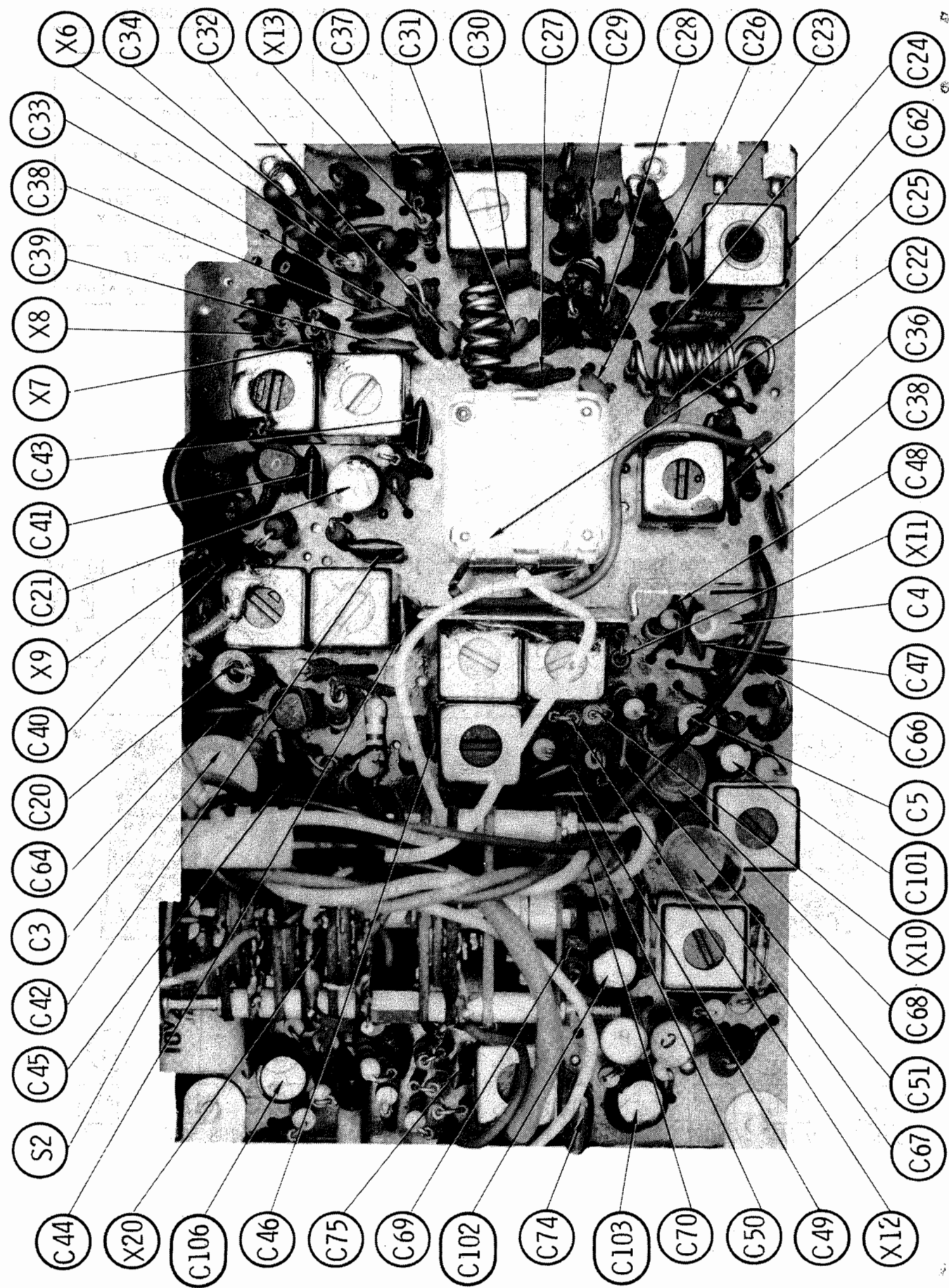












ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 117VAC. Allow a 15-minute warm-up period. Use only enough generator output to obtain a suitable indication. Suggested Alignment Tools: A1 thru A12.....GENERAL CEMENT #8868,8987,9089.....WALSCO #2531-X,2541,2587

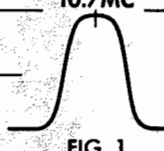
AM ALIGNMENT—SELECTOR IN AM POSITION

Connect generator across loop fashioned of several turns of wire. Set volume at maximum.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 455KC 400 cycle modulation	Tuning gang fully open.	Output Meter across voice coil.	A1,A2 A3	Adjust for maximum. Repeat until no further improvement can be made.
2. 1650KC	"	"	A4	Adjust for maximum.
3. 1400KC	Tune to signal	"	A5	"
4. 600KC	"	"	A6	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR—SELECTOR IN FM POSITION

High side of generator thru .001mfd to point \diamond , low side to ground.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC Unmodulated	Point of non-interference	DC probe of VTVM to point \diamond , common to ground.	A7,A8 A9,A10	Adjust for maximum. 
6. "	"	DC probe of VTVM to point \diamond , common to ground.	A11	Adjust for zero reading. A positive or negative reading will be obtained on either side of the correct setting.

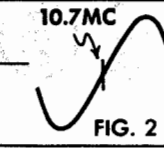
FM IF ALIGNMENT USING FM SIGNAL GENERATOR—SELECTOR IN FM POSITION

High side of generator thru .001mfd to point \diamond , low side to ground. Use only enough marker signal for indication. Use 60 cycle frequency modulated signal with 450KC sweep. Use 60 cycle sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. 10.7MC 450KC Sweep	Point of non-interference	Vert. amp of scope to point \diamond , low side to ground.	A7,A8 A9,A10	Disconnect stabilizing capacitor C5. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C5.
6. "	"	Vert. amp of scope to point \diamond , low side to ground.	A11	Adjust A11 (secondary) to place marker at center of "S" curve similar to Fig. 2. Readjust A7 (primary) for maximum amplitude and straightness of line.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead.

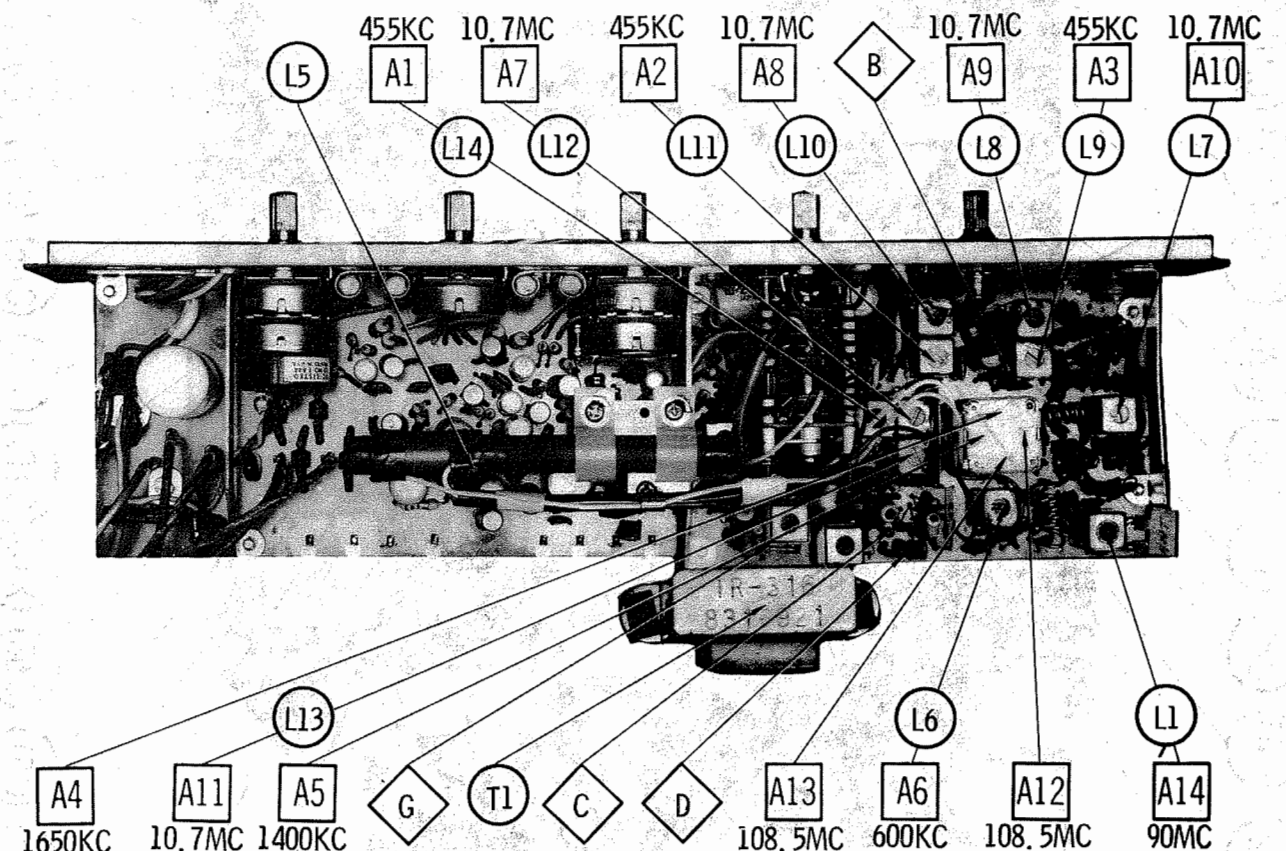
GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
7. 109MC	High freq. end	DC probe of VTVM to point \diamond , common to ground.	A12 A13	Adjust for maximum. 
8. 90MC Unmodulated	Tune to signal.	"	A14	Rock tuning and adjust for maximum. Repeat steps 7 and 8 until no further improvement can be made.

ALIGNMENT INSTRUCTIONS (Continued)

FM STEREO MULTIPLEX ALIGNMENT USING FM STEREO SIGNAL GENERATOR ($\pm .0001\%$ ACCURACY)

High side of generator thru 47K to point \diamond , low side to ground.

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
10. 19KC	Vert. amp of scope thru 47K to point \diamond , low side to ground.	A15 A16	Adjust for maximum.
11. "	Vert. amp of scope thru 47K to point \diamond , low side to ground.	A17	Adjust for maximum 38KC response.
12. Modulated Left Channel	Vert. amp of scope to point \diamond , low side to ground.	A15,A16 A17,R4	Adjust for MINIMUM. This step should require only slight adjustment.
13. Modulated Right Channel	Vert. amp of scope to point \diamond , low side to ground		Check for MINIMUM. If necessary make compromise adjustment of A15,A16,A17&R4



PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	6" PM*, 8 ohms Z	(1) SP-305 (2)	(1) MODEL 4301TK	PART NO. SP-650
SP2	3" PM, 8 ohms Z	(1) SP-305 (2)	5201WA	SP-650
SP3	6" PM*, 8 ohms Z	(1) SP-305 (2)	5201AWA	SP-650
SP4	3" PM, 8 ohms Z	(1) SP-305 (2)	6201WA	SP-605
			6202MA	SP-605
			6203PC	SP-605
			6204WA	SP-605
			6300WA	SP-852*
			7200WA	SP-653
			7202PC	SP-653
(2) Used in All Models.				
* SP1 and SP3 are 8" in Model 6300WA.				

PHONO CARTRIDGE & NEEDLES

PHONO CARTRIDGE & NEEDLES							
ITEM No.	REPLACEMENT DATA						NOTES
	MFGR. PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		
	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1	TN4B (1)		133	N50	6208	3332	(1) Models 6201WA,6202MA,6203PC, 6204WA.
M2	TN4BD (2)	TN4 (1)	133D	N50Sd	5208d	3332dS	(2) Models 4301TK,5201WA,5201AWA, 6300WA,7200WA,7202PC.
		TN4D (2)		N56		3332	
				N56Sd		3332dS	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M3	Motor	1056-1 (300-1) 60373	Phono (used in all models except 4301TK, 5201-WA, 5201A-WA)
S1	Switch	SR0805009-0	Phono (used in Model 4301TK, 5201-WA, 5201A-WA)
S2	Switch	S14	Power (On-Off) (On Changer)
	45RPM Spindle Adaptor	S70	Function (AM-FM-AFC-Phono)
	45RPM Spindle Adaptor		(Used in all models except 4301TK, 5201-WA, 5201A-WA)
	Idle Wheel		(Used in Models 4301TK, 5201-WA, 5201A-WA)
			WALSCO Replacement #1499-44

CABINETS & CABINET PARTS

(When ordering specify model, chassis & color)

ITEM	PART NO.	MODEL	4301TK	5201WA	5201AWA	6201WA	6202MA	6203PC	6204WA	6300WA	7200WA	7202PC
Cabinet	C-176		X									
Cabinet	C-169			X								
Cabinet	C-198				X							
Speaker Cabinet	MP-160-6		X									
Speaker Cabinet	SB-113			X	X							
Handle	AE-170		X									
Knob, Function Switch	KN-772		X									
Knob, Function Switch	KN-769			X								
Knob, Tuning	KN-782		X									
Knob, Tuning	KN-781			X	X							
Knob, Tuning	KN-780					X	X	X	X		X	X
Knob, Tuning	KN-790									X		
Knob, Control	KN-771		X									
Knob, Control	KN-768			X								
Knob, Control	KN-779				X	X	X	X	X	X	X	X

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord	8524 (Stranded) Available in 12 Colors
	17106 (Plastic) or 17126 (Rubber) - 6 Feet
	17109 (Plastic) or 17129 (Rubber) - 9 Feet
Low-loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401 or 8421
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor-Unshielded)
	8429 (Two Conductor-Shielded)
	8419 (Three Conductor-Shielded)

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA				
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	SYLVANIA PART No.
Q1	2SC829A	FM RF Amp	HT308291A-0	GE-20	TR-22	HEP50	SK3018
Q2	2SC829B	FM Converter	HT308291A-0	GE-20	TR-22	HEP50	SK3018
Q3	2SC380-0	AM Converter	HT303801B-0	GE-20	TR-22	HEP56	SK3018
Q4	2SC371-0	1st FM IF Amp	HT303711B-0	GE-17	TR-51	HEP50	SK3018
Q5	2SC372	1st AM IF Amp	HT3037210-0	GE-10	TR-51	HEP55	SK3018
		2nd FM IF Amp					
		2nd AM IF Amp					
		3rd FM IF Amp					
Q6	2SA495-0	AF Amp	HT104951B-0	GE-21	TR-19	HEP52	SK3025
Q7	2SB54B	AF Amp	HT200541B-0	GE-9	TR-17	HEP633	SK3006
Q8	2SB56C	AF Amp	HT200561C-0	GE-2	TR-14	HEP632	SK3004
Q9	2SD72	Output	HK040519B	GE-8	TR-09	HEP641	SK3010
Q10	2SB405	Output	HT104951B-0	GE-2	TR-05	HEP238	SK3004
Q11	2SA495-0	AF Amp	HT104951B-0	GE-21	TR-19	HEP52	SK3025
Q12	2SB54B	AF Amp	HT200541B-0	GE-9	TR-17	HEP633	SK3006
Q13	2SB56C	AF Amp	HT200561C-0	GE-2	TR-14	HEP632	SK3004
Q14	2SD72	Output	HK040519B	GE-8	TR-09	HEP641	SK3010
Q15	2SB405	Output	HT104951B-0	GE-2	TR-05	HEP238	SK3004
Q16	M8640E	Bias	HV0000405-0	GE-2	TR-05	HEP254	SK3004
Q17	M8640E	Bias	HV0000405-0	GE-2	TR-05	HEP254	SK3004
Q18	2SB56C	Stereo Indicator SW	HT200561C-0	GE-2	TR-14	HEP632	SK3004
Q19	2SC372	MPX Input Amp	HT3037210-0	GE-10	TR-51	HEP55	SK3018
Q20	2SB54B	38KC Amp	HT200541B-0	GE-9	TR-17	HEP633	SK3006

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	HD2000301-0(HR-5A)	GE-504A (1)	18DB2A (2) or 8D4 (1)	SK3030 (1) or SK3031 (1)	ECG 166 (2) or ECG 116 (1)	(1) Four required.
X2	HD2000301-0(HR-5A)	GE-504A (1)	8D4	SK3030 (1) or SK3031 (1)	ECG 116	(2) A single unit replacement for all four bridge circuit rectifiers.
X3	HD2000301-0(HR-5A)	GE-504A (1)	8D4	SK3030 (1) or SK3031 (1)	ECG 116	
X4	HD2000301-0(HR-5A)	GE-504A (1)	18DB2A (2)	SK3030 (1) or SK3031 (1)	ECG 116	Varactor
X6	HD40000109-0(1S352)					
X7	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 109	
X8	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 109	
X9	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 109	
X10	HD1000105-0(1N60)	1N60	1N60	1N60	ECG 110 (4)	(4) Matched pair.
X11	HD1000105-0(1N60)	1N60	1N60	1N60	ECG 109	
X12	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 109	
X13	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 110 (4)	
X14	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 110 (4)	
X15	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 110 (4)	
X16	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 110 (4)	
X17	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 110 (4)	
X18	HD1000303-0(1S188)	1N60	1N60	1N60	ECG 116 or ECG 117	
X19	HD1000303-0(1S188)	1N60	1N60	1N60		
X20	HD2000301-0(HR-5A)	GE-504A	8D4 or 5A4-D	SK3030 or SK3031		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		SYMPHONIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	2200 16V	EA2280161-0	PRS1296	EA15-2000	WBR2000-16	QT1-33	TC2520	TL-1167.5
C2	470 10V	EA4770103-0	PRS1170	EA15-500	PC500-16	QT1-30A	MTV500DN15	TL-1141
C3	200 10V		PTT47	EA15-250	PC200-16	MT1-23	MTV200CK10	TE-1137
	220 10V	EA2270102-0						
C4	.27 25V				TYR13BF274K		TAS274K035POA	1960334X0035D
	.27 10V	EV2740101-0						
C5	4.7 16V		PTT112	EA15-5	WBR5-150	MT1-3	MTA5D50	TE-1152
	4.7 10V	ED4750102-0	CRE604A	EA15-5	WBR5-150	MT1-3	MTA5D50	TE-1127
C6	.47 50V				TYR13BG474K		TAS474K50POA	
	.47 16V	EA4740161-0						
C7	10 10V	ED1060102-0	PTT39	EA15-10	AL10-25	MT1-5	MTA10D35	TE-1128
C8	22 10V	EA2260101-0	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1130
C9	100 6.3V	EA1070061-0	MCD-170	EP6-100	PC100-16	MT1-21	MTV100CB6	TE-1102
C10	10 10V		PTT39	EA15-10	AL10-25	MT1-5	MTA10D35	TE-1128
	10 16V	EA1060162-0	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		SYMPHONIC PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C11	22 10V	EA2260101-0	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1130
C12	200 10V		PTT47	EA15-250	PC200-16	MT1-23	MTV200CK10	TE-1137
C13	220 10V	EA2270102-0						
	.47 50V				TYR13BG474		TAS474K50P0A	
C14	.47 16V	EA4740161-0						
C15	10 10V	ED1060102-0	PTT39	EA15-10	AL10-25	MT1-5	MTA10D35	TE-1128
C16	22 10V	EA2260101-0	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1130
C17	100 6.3V	EA1070061-0	MCD-170	EP6-100	PC100-16	MT1-21	MTV100CB6	TE-1102
	10 16V			EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C18	10 10V	ED1060102-0	PTT39	EA15-10	AL10-25	MT1-5	MTA10D35	TE-1128
C19	22 10V	EA2260101-0	MCD-90	EP15-25	PC20-50	MT1-10	MTV20CD50	TE-1130
C20	200 10V	EA2270102-0	PTT47	EA15-250	PC200-16	MT1-23	MTV200CK10	TE-1137
	4.7 16V		PTT112	EA15-5	WBR5-150	MT1-3	MTA5D50	TE-1152
	4.7 10V	ED4750101-0	CRE604A	EA15-5	WBR5-150	MT1-3	MTA5D50	TE-1127
C21	33 6.3V	EA3360061-0	MCD-110	EP6-25	PC30-35	MT1-13	MTV30CB25	TE-1132.1
C101	3.3 25V	EA3350251-0	MCD-40	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C102	10 16V	EA1060162-0	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C103	10 16V	EA1060162-0	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C104	200 10V	EA2270102-0	PTT47	EA15-250	PC200-16	MT1-23	MTV200CK10	TE-1137
C105	200 10V	EA2270102-0	PTT47	EA15-250	PC200-16	MT1-23	MTV200CK10	TE-1137
C106	10 16V	EA1060162-0	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C107	10 16V	EA1060162-0	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C22	.001	#CPR2240009-0	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C23	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C24	20		NPO-DI 20	DTZ-20	NP020	CCD-200	CN0420	10TCC-Q20
C25	5		NPO-DI 5.0		NP05			10TCC-V50
C26	5		NPO-DI 5.0		NP05			10TCC-V50
C27	30					CCD-300		10TCC-Q30
C28	500		GPD X5F501K	DM-501	GP500	CCD-501	GP350	10TS-T50
C29	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C30	50		GPD X5F500K	DD-500	NP050	CCD-500	GP450	10TS-Q50
C31	15		NPO-DI 15	DTZ-15	NP015	CCD-150	CN0415	10TCC-Q15
C32	7	#001207001-0			NP07			
C33	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	T6-S10
C34	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	T6-D50
C35	5		NPO-DI 5.0		NP05			10TCC-V50
C36	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C37	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C38	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C39	15		NPO-DI 15	DTZ-15	NP015	CCD-150	CN0415	10TCC-Q15
C40	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C41	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C42	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C43	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C44	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C45	.04		DBE6S4		DPMS6S4	4DP-3-403	PVC214	6PS-S40
C46	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C47	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C48	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C49	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C50	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C51	.04		DBE6S4		DPMS6S4	4DP-3-403	PVC214	6PS-S40
C52	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C53	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C54	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C55	.015		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C56	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C57	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C58	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C59	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C60	.015		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C61	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C62	30			DD-300		CCD-300	GP430	10TS-Q30
C63	.04		DBE6S4					
C64	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	T6-S10
C65	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	T6-S10
C66	.0033		CPR-3300J		DMF6D33	6DP-1-332	PVC6233	6PS-D33
C67	.0047		CPR-4700J		CD19F472J500	DM-19-472	SX247	MS-247
C68	.0047		CPR-4700J		CD19F472J500	DM-19-472	SX247	MS-247
C69	.001		CPR-1000J		CD19F102J500	DM-19-102J	SX210	424ME1001J501
C70	.82		DTZ-82		NP082	CCD-820	CN0482	10TCC-Q82
C71	.0033		V1614D33	CPR-3300J	DMF6D33	6DP-1-332	PVC6233	6PS-D33
C72	.015		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C73	.015		V1612S15	DD-153	DPMS6S15	1DP-1-153	PVC2115	225P15391WD3
C74	.04		DBE6S4		DPMS6S4	4DP-1-403	PVC114	6PS-S40
C75	.0015		V1614D15	CPR-1500J	DPMS-6D15	6DP-1-152	PVC6215	225P15291
C76	.5	200V	V1616P5		DPMS2P5	2DP-5-504	PVC205	2PS-P50
C77	.5	200V	V1616P5		DPMS2P5	2DP-5-504	PVC205	2PS-P50

Symphonic Part Number

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1a	Volume, Right	50K	RM0503026,-0	F2-50K (1), R2-50K, SSK014, CPL-2		B13-123, B13-123,SK1 (1) QCM or [BU1 (1),CF63, CR62,SS1,SS7A, DC1]*	P54A,3014(1), RU54A, CS3500
b	Volume, Left	50K					
R2a	Tone, Right	50K	RM1503010,-0	F2-50K (1), R2-50K, SSK014, CPL-2,KR-1		B13-123, B13-123,SK1(1), QCM,76-1 or [BU1 (1),CF63, CR62,SS1,SS7A, GC]*	P54A,3014(1), RU54A,CS3500, US41
b	Tone/Left Switch	50K					
R3	Balance	20K	RK0203012,-0	F1-25K(1), SSK014	A47-20K-S(1), KSS-3 or [NP-20K-S(1), UP-C-400]	Q11-119(1) or [BU1(1),CF62, SS1,DC1]*	RU253L,SL36, SL3250 or [UA24L(1), SK1000] or U26(1)
R4	Separation	10K		TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)

* "SNAPTROL"

(1) Enlarge mounting hold.

(2) Cut off one of the end terminals and bend to fit "PC" board.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R59	10 1/4W	CD10	RT1010014-0	R76	10 1/4W	CD10	RT1010014-0
R62	1 1/2W		RT1001012-0	R79	1 1/2W		RT1001012-0
R63	1 1/2W		RT1001012-0	R80	1 1/2W		RT1001012-0
				R95	2.2 1/2W		RC1002212-0

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	FM Antenna	LA1010005-0			
L2	FM RF	LK1040606-0			
L3	10.7MC Trap	LC1751001			
L4	FM Oscillator	LK1040605-0			
L5	Loopstick	LF1100009-0	14-9009	7788	TB505
L6	AM Oscillator	LO/001020-0	14-9018	2069	
L7	FM Input IF	LI1001611-0			
L8	FM Interstage IF	LI1001602-0	16-9031	2071	
L9	AM Input IF	LI1001004-0	16-9026	2066	
L10	FM Output IF	LI1001601-0	16-9032	2072	
L11	AM Interstage IF	LI1001040-0	16-9027	2067	
L12	Ratio Detector Pri	LI1008601-0			
L13	Ratio Detector Sec	LI1001606-0			
L14	AM Output IF	LI1001009-0	16-9028	2068	
L15	19KC Trap	LS1001004-0		1360 (1)	T881
L16	67KC Trap	LC2565001-0		6304	T883
L17	19KC Trap	LC2226001-0		6308	
L18	19KC Doubler	LS1001004-0		1360 (1)	
L19	38KC Output	LS1001003-0			

(1) Shunt with .01uf cap.

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @.06AAC	11VAC @.4ADC Max	6.3VAC @.02AAC	TR316 (129P59)				